PB83-228916

# MESOPUFF Model
(Addendum/Supplemental Information)

(U.S.) Environmental Sciences Research Lab.
Research Triangle Park, NC

Dec 82

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**16. Abstract (Limit: 200 words)**

This supplemental information on the MESOPUFF model is part of the documentation of the UNAMAP Version 5 package. It enables users to update their guide for this model. The coding changes documented in the report have already been made to the source code included as part of the UNAMAP Version 5 tape.

**17. Document Analysis a. Descriptors**

Atmospheric Sciences
Meteorology
Atmospheric Pollution
Air Pollution
Diffusion
Models
Simulation
Algorithms

**b. Identifiers/Open-Ended Terms**

**c. COSATI Field/Group**

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ADDENDUM/SUPPLEMENTAL INFORMATION FOR MESOPUFF (DECEMBER 1982).

MESOPUFF (Version 6.0) TEST CASE INPUT

```
&MODEL LPUFF=T,&END
&CONTR NAUVTS=48,&END
 &GRID &END
 &SIGMA &END
 &METD METSHT=7R16500,METCOD=1003,&END
 &PUFF1 &END
 &PUFF2 &END
 &REMOV &END
 &OUTPT &END
 &SOURC NSOURC=10,&END
   8.8      8.8     2560.      0.      6397.
  152.     23.4     14.0      343.8     0.      1503.
  152.     17.2     18.9      633.4     0.      2847.
  152.     23.7     13.0      488.      0.      3353.
  183.     13.5     1.2       53.7      0.      3016.
  229.     10.0     13.1      320.      0.      6222.
 76.2      8.0      19.5      146.9     0.      240.
  183.     9.7      15.2      1310.8    0.      3016.
  175.     0.9      8.0       268.8     0.      1047.
  152.     1.5      4.1       1011.     0.      11144.
```

# MESOPUFF (Version 6.0) TEST CASE OUTPUT

VERSION NUMBER 6.0
LEVEL 821015
MESOPUFF

```
//LPUFF=T;
//9999
//NADVTS=48,;
//9999
//;
//9999
//;
//9999
//METSRT=7816500,METCOD=1003;
//9999
//;
//9999
//;
//9999
//;
//9999
//;
//9999
//NSOURC=10;
//9999
 LPLUME = F LPUFF = T LGRID = F LPAC = F LFILE = F
 DTIME =   .10000E+01 MTFREQ =   1 IAVG =  24 NADVTS =  48
 IELMET =  26 JELMET =  26 DELTMT =   .40000E+05 IASTAR =   1 IASTOP =  26 JASTAR =   1 JASTOP =  26
 ISASTR =   1 JSASTR =   1 ISASTP =  26 JSASTP =  26 MESHDN =   1
 AY =   .33000E+00   .22000E+00   .17000E+00   .12000E+00   .86000E-01   .57000E-01
 BY =  -.10000E+00  -.10000E+00  -.10000E+00  -.10000E+00  -.10000E+00  -.10000E+00
 AZ =   .48000E-03   .63000E-01   .10000E+00   .83000E+00   .41000E+00   .32000E+00
 BZ =   .11000E+01   .90000E-01  -.90000E-01  -.42000E+00   .53000E+00  -.58000E+00
 METSRT =  7816500 METCOD =  1003 LSENSE = F
 NPUFTS =   1 NSAMAD =   1 LVARSA = T MAXSAM = 100
 IPFLIM = 600 CHMIN =   .00000E+00   .00000E+00  NSIGMA =   3 LANUAL = F LUFORM = T
 CONVFR =   .20000E-01 LDCAY = T EXTNCT =  -.55600E-05 LDEPOT = T DEPVEL =   .10000E-01   .10000E-02
LWASH = F WASHOT =   .00000E+00   .00000E+00
 LECHO = T LPRINT = T IPRINF =  24 LEXACT = F LSAVE = F ISAVEF =  24
 NSOURC =  10 LMISS = F LFLUX = F
 STAKHT =   .23600E+03   .15200E+03   .15200E+03   .15200E+03   .18300E+03
           .22900E+03   .76200E+02   .18300E+03   .17500E+03   .15200E+03
 XXSTAK =   .88000E+01   .23400E+02   .17200E+02   .23700E+02   .13500E+02
           .10000E+02   .80000E+01   .97000E+01   .90000E+00   .15000E+01
 YYSTAK =   .88000E+01   .14000E+02   .18900E+02   .13000E+02   .12000E+01
           .13100E+02   .19500E+02   .15200E+02   .80000E+01   .41000E+01
 EMISS =   .25600E+04   .00000E+00   .34380E+03   .00000E+00   .63340E+03
           .00000E+00   .48800E+03   .00000E+00   .53700E+02   .00000E+00
           .32000E+03   .00000E+00   .14690E+03   .00000E+00   .13108E+04
           .00000E+00   .26880E+03   .00000E+00   .10110E+04   .00000E+00
 ECYCLE =   .10000E+01   .10000E+01   .10000E+01   .10000E+01   .10000E+01
            .10000E+01   .10000E+01   .10000E+01   .10000E+01   .10000E+01
            .10000E+01   .10000E+01   .10000E+01   .10000E+01   .10000E+01
            .10000E+01   .10000E+01   .10000E+01   .10000E+01   .10000E+01
            .10000E+01   .10000E+01   .10000E+01   .10000E+01   .10000E+01
            .10000E+01   .10000E+01   .10000E+01   .10000E+01   .10000E+01
            .10000E+01   .10000E+01   .10000E+01   .10000E+01   .10000E+01
            .10000E+01   .10000E+01   .10000E+01   .10000E+01   .10000E+01
            .10000E+01   .10000E+01   .10000E+01   .10000E+01   .10000E+01
            .10000E+01   .10000E+01   .10000E+01   .10000E+01   .10000E+01
            .10000E+01   .10000E+01   .10000E+01   .10000E+01   .10000E+01
            .10000E+01   .10000E+01   .10000E+01   .10000E+01   .10000E+01
            .10000E+01   .10000E+01   .10000E+01   .10000E+01   .10000E+01
            .10000E+01   .10000E+01   .10000E+01   .10000E+01   .10000E+01
            .10000E+01   .10000E+01   .10000E+01   .10000E+01   .10000E+01
            .10000E+01   .10000E+01   .10000E+01   .10000E+01   .10000E+01
            .10000E+01   .10000E+01   .10000E+01   .10000E+01   .10000E+01
            .10000E+01   .10000E+01   .10000E+01   .10000E+01   .10000E+01
            .10000E+01   .10000E+01   .10000E+01   .10000E+01   .10000E+01
```

```
                .10000E+01    .10000E+01    .10000E+01    .10000E+01    .10000E+01
```

| | | | | |
|---|---|---|---|---|
| .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 |
| .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 |
| .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 |
| .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 |
| .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 |
| .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 |
| .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 |
| .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 |
| .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 |
| .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 |
| .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 |
| .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 |
| .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 |
| .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 |
| .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 |
| .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 |
| .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 |
| .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 |
| .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 |
| .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 | .10000E+01 |

24.0-HOUR CONCENTRATION (GRAMS/CUBIC METER) ENDING 0 166 78 (HOUR,DAY,YEAR) FOR
POLLUTANT 1: SULFUR DIOXIDE

THERE FOLLOWS 1 TABLE(S):

1) A 4 PAGE GRID OF CONCENTRATIONS, EXPRESSED IN INTEGER UNITS OF AN APPROPRIATE EXPONENT
PAGE 1: NW CORNER, PAGE 2: SW CORNER, PAGE 3: NE CORNER, PAGE 4: SE CORNER

********** MESOPUFF VERSION 6.0 **********

TABLE 1 POLLUTANT 1 24.0 HOUR AVERAGE ENDING 0 166 78 (HOUR,DAY,YEAR) FIELD IN UNITS OF 10** -8

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 5 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 12 | 14 | 7 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 8 | 18 | 19 | 3 | 0 | 0 | 0 | 1 | 2 | 3 | 5 | 5 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 27 | 17 | 1 | 1 | 1 | 2 | 4 | 9 | 16 | 16 | 13 | 7 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 48 | 7 | 2 | 1 | 5 | 9 | 14 | 29 | 47 | 39 | 26 | 15 | 9 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 4 | 2 | 11 | 16 | 33 | 70 | 89 | 50 | 32 | 28 | 22 | 65 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 5 | 3 | 8 | 26 | 81 | 132 | 133 | 30 | 5 | 6 | 8 | 5 | 9 |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 7 | 5 | 1 | 27 | 170 | 203 | 74 | 5 | 5 | 12 | 17 | 11 | 4 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 3 | 9 | 7 | 1 | 3 | 245 | 142 | 8 | 7 | 10 | 17 | 10 | 6 | 4 | 3 | 1 |
| 0 | 0 | 0 | 0 | 0 | 1 | 9 | 11 | 1 | 1 | 335 | 7 | 14 | 15 | 21 | 12 | 6 | 10 | 16 | 16 | 10 | 3 |
| 0 | 0 | 0 | 0 | 0 | 6 | 18 | 1 | 0 | 3 | 8 | 19 | 32 | 15 | 8 | 14 | 23 | 37 | 50 | 40 | 17 | 4 |
| 0 | 0 | 0 | 0 | 2 | 28 | 2 | 0 | 2 | 8 | 14 | 51 | 14 | 23 | 26 | 37 | 66 | 93 | 79 | 36 | 10 | 2 |
| 0 | 0 | 0 | 0 | 23 | 5 | 0 | 0 | 8 | 18 | 22 | 19 | 40 | 45 | 66 | 111 | 93 | 47 | 19 | 6 | 1 | 0 |
| 0 | 0 | 0 | 3 | 26 | 0 | 0 | 4 | 22 | 28 | 18 | 55 | 81 | 134 | 91 | 23 | 4 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 102 | 0 | 0 | 1 | 24 | 33 | 13 | 34 | 169 | 74 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 16 | 0 | 0 | 0 | 14 | 41 | 7 | 0 | 486 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 3 | 52 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 56 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 55 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 3 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 7 | 5 | 4 | 3 | 2 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | |
|---|---|---|---|
| 0 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 |
| 3 | 1 | 0 | 0 |
| 3 | 1 | 0 | 0 |
| 9 | 13 | 7 | 3 |
| 65 | 52 | 45 | 20 |
| 18 | 23 | 20 | 8 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 6 | 0 |
| 0 | 0 | 115 | 14 |
| 0 | 0 | 55 | 45 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |

********** MESOPUFF VERSION 6.0 **********

```
 0    0    0    0
 +    +    +    +

 0    0    0    0
 +    +    +    +

 0    0    0    0
 +    +    +    +

 1    0    0    0
 +    +    +    +

 1    0    0    0
 +    +    +    +

 0    0    0    0
 +    +    +    +
```

********** MESOPUFF VERSION 6.0 **********

24.0-HOUR CONCENTRATION (GRAMS/CUBIC METER) ENDING 0 166 78 (HOUR,DAY,YEAR) FOR
POLLUTANT 2: SULFATES

THERE FOLLOWS 1 TABLE(S):

1) A 4 PAGE GRID OF CONCENTRATIONS, EXPRESSED IN INTEGER UNITS OF AN APPROPRIATE EXPONENT
PAGE 1: NW CORNER, PAGE 2: SW CORNER, PAGE 3: NE CORNER, PAGE 4: SE CORNER

********** MESOPUFF VERSION 6.0 **********

TABLE 1 POLLUTANT 2 24.0 HOUR AVERAGE ENDING 0 166 78 (HOUR,DAY,YEAR) FIELD IN UNITS OF 10** -9

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 10 | 18 | 23 | 12 | 0 | 0 | 0 | 0 | 1 | 3 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 18 | 35 | 47 | 26 | 4 | 0 | 0 | 0 | 2 | 9 | 19 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 17 | 40 | 49 | 15 | 5 | 1 | 1 | 3 | 11 | 30 | 53 | 57 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 14 | 41 | 38 | 15 | 7 | 4 | 9 | 20 | 57 | 120 | 144 | 120 | 72 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 7 | 39 | 24 | 21 | 11 | 17 | 31 | 57 | 150 | 288 | 278 | 158 | 81 | 45 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 13 | 23 | 29 | 16 | 25 | 39 | 110 | 283 | 414 | 273 | 102 | 59 | 55 | 157 |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 9 | 22 | 36 | 23 | 15 | 45 | 201 | 381 | 444 | 125 | 29 | 38 | 51 | 40 | 34 |
| 0 | 0 | 0 | 0 | 0 | 0 | 4 | 17 | 40 | 31 | 7 | 34 | 286 | 402 | 179 | 21 | 23 | 53 | 85 | 62 | 28 | 9 |
| 0 | 0 | 0 | 0 | 0 | 1 | 10 | 40 | 40 | 7 | 8 | 242 | 194 | 41 | 34 | 37 | 59 | 43 | 38 | 37 | 25 | 8 |
| 0 | 0 | 0 | 0 | 0 | 4 | 35 | 51 | 7 | 5 | 127 | 46 | 66 | 66 | 66 | 40 | 33 | 73 | 124 | 140 | 89 | 25 |
| 0 | 0 | 0 | 0 | 0 | 19 | 67 | 6 | 2 | 20 | 52 | 81 | 101 | 66 | 45 | 71 | 133 | 234 | 346 | 305 | 145 | 33 |
| 0 | 0 | 0 | 0 | 4 | 82 | 7 | 0 | 10 | 48 | 84 | 120 | 86 | 95 | 106 | 169 | 327 | 507 | 481 | 250 | 79 | 14 |
| 0 | 0 | 0 | 0 | 50 | 15 | 0 | 2 | 36 | 95 | 127 | 108 | 126 | 139 | 229 | 426 | 405 | 232 | 108 | 37 | 9 | 1 |
| 0 | 0 | 0 | 4 | 58 | 0 | 0 | 17 | 96 | 132 | 96 | 120 | 173 | 335 | 267 | 79 | 17 | 2 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 150 | 0 | 0 | 3 | 86 | 133 | 55 | 43 | 226 | 130 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 11 | 0 | 0 | 0 | 42 | 134 | 26 | 1 | 318 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 7 | 134 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 110 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 74 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 3 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

********** MESOPUFF VERSION 6.0 **********

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 3 | 3 | 2 | 2 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 12 | 12 | 12 | 11 | 10 | 8 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 8 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | |
|---|---|---|---|
| 7 | 6 | 3 | 1 |
| 23 | 15 | 5 | 1 |
| 39 | 16 | 4 | 0 |
| 31 | 10 | 3 | 1 |
| 37 | 56 | 38 | 15 |
| 200 | 199 | 214 | 106 |
| 57 | 85 | 93 | 43 |
| 2 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 |
| 3 | 0 | 11 | 0 |
| 1 | 0 | 51 | 15 |
| 0 | 0 | 16 | 32 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |

********** MESOPUFF VERSION 6.0 **********

| | | | |
|---|---|---|---|
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 |
| 6 | 3 | 1 | 0 |
| 5 | 2 | 1 | 0 |
| 1 | 0 | 0 | 0 |

********** MESOPUFF VERSION 6.0 **********

24.0-HOUR CONCENTRATION (GRAMS/CUBIC METER) ENDING 0 167 78 (HOUR,DAY,YEAR) FOR
POLLUTANT 1: SULFUR DIOXIDE

THERE FOLLOWS 1 TABLE(S):

1) A 4 PAGE GRID OF CONCENTRATIONS, EXPRESSED IN INTEGER UNITS OF AN APPROPRIATE EXPONENT
PAGE 1: NW CORNER, PAGE 2: SW CORNER, PAGE 3: NE CORNER, PAGE 4: SE CORNER

********** MESOPUFF VERSION 6.0 **********

TABLE 1 POLLUTANT 1 24.0 HOUR AVERAGE ENDING 0 167 78 (HOUR,DAY,YEAR) FIELD IN UNITS OF 10** -8

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 5 | 10 | 2 | 1 | 3 | 6 | 15 | 29 | 36 | 27 | 15 | 10 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 25 | 10 | 2 | 4 | 14 | 28 | 45 | 64 | 53 | 31 | 19 | 17 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 14 | 18 | 2 | 5 | 23 | 38 | 46 | 69 | 54 | 31 | 21 | 20 | 29 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 47 | 3 | 4 | 20 | 40 | 38 | 72 | 46 | 25 | 19 | 21 | 38 | 81 |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 3 | 17 | 3 | 8 | 42 | 24 | 73 | 36 | 17 | 19 | 22 | 36 | 89 | 78 |
| 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 3 | 2 | 4 | 30 | 20 | 75 | 35 | 13 | 21 | 26 | 31 | 219 | 90 | 44 |
| 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 2 | 3 | 7 | 62 | 37 | 52 | 12 | 23 | 35 | 39 | 45 | 46 | 42 | 36 |
| 0 | 0 | 0 | 0 | 0 | 1 | 5 | 4 | 3 | 4 | 10 | 12 | 91 | 12 | 32 | 44 | 47 | 55 | 60 | 56 | 45 | 32 |
| 0 | 0 | 0 | 0 | 0 | 3 | 7 | 4 | 3 | 6 | 21 | 191 | 13 | 31 | 50 | 53 | 64 | 83 | 74 | 53 | 34 | 19 |
| 0 | 0 | 0 | 0 | 0 | 6 | 8 | 4 | 3 | 10 | 41 | 13 | 39 | 54 | 61 | 53 | 92 | 85 | 43 | 22 | 12 | 6 |
| 0 | 0 | 0 | 0 | 2 | 12 | 8 | 4 | 4 | 12 | 10 | 17 | 49 | 72 | 44 | 85 | 85 | 23 | 6 | 4 | 3 | 1 |
| 0 | 0 | 0 | 0 | 9 | 16 | 7 | 2 | 8 | 13 | 10 | 39 | 73 | 38 | 83 | 84 | 10 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 1 | 24 | 16 | 2 | 2 | 12 | 11 | 15 | 45 | 44 | 89 | 88 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 10 | 35 | 5 | 0 | 6 | 14 | 11 | 24 | 58 | 51 | 55 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 60 | 12 | 0 | 1 | 13 | 10 | 23 | 60 | 61 | 72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 14 | 26 | 0 | 0 | 6 | 14 | 19 | 20 | 77 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 45 | 0 | 0 | 1 | 15 | 23 | 23 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 16 | 44 | 23 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 3 | 85 | 12 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 187 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 98 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 2 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 4 | 2 | 2 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 4 | 3 | 2 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 1 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | |
|---|---|---|---|
| 10 | 10 | 7 | 4 |
| 22 | 23 | 20 | 9 |
| 44 | 38 | 25 | 11 |
| 58 | 40 | 29 | 14 |
| 69 | 48 | 32 | 15 |
| 34 | 27 | 20 | 11 |
| 28 | 21 | 13 | 7 |
| 21 | 13 | 7 | 3 |
| 10 | 5 | 3 | 4 |
| 2 | 1 | 15 | 4 |
| 0 | 3 | 21 | 8 |
| 0 | 0 | 14 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 1 | 1 | 0 |
| 1 | 1 | 1 | 0 |

********** MESOPUFF VERSION 6.0 **********

```
 1    1    1    0
 +    +    +    +

 1    1    1    0
 +    +    +    +

 0    0    0    0
 +    +    +    +

 0    0    0    0
 +    +    +    +

 0    0    0    0
 +    +    +    +

 0    0    0    0
 +    +    +    +
```

24.0-HOUR CONCENTRATION (GRAMS/CUBIC METER) ENDING 0 167 78 (HOUR,DAY,YEAR) FOR
POLLUTANT 2: SULFATES

THERE FOLLOWS 1 TABLE(S):

1) A 4 PAGE GRID OF CONCENTRATIONS, EXPRESSED IN INTEGER UNITS OF AN APPROPRIATE EXPONENT
PAGE 1: NW CORNER, PAGE 2: SW CORNER, PAGE 3: NE CORNER, PAGE 4: SE CORNER

********** MESOPUFF VERSION 6.0 **********

TABLE 1 POLLUTANT 2 24.0 HOUR AVERAGE ENDING 0 167 78 (HOUR,DAY,YEAR) FIELD IN UNITS OF 10** -9

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 7 | 13 | 18 | 29 | 12 | 16 | 33 | 64 | 118 | 203 | 249 | 203 | 140 | 110 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 17 | 24 | 55 | 30 | 21 | 45 | 104 | 186 | 283 | 393 | 357 | 251 | 187 | 169 |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 9 | 24 | 35 | 38 | 20 | 46 | 132 | 213 | 267 | 383 | 338 | 237 | 187 | 176 | 210 |
| 0 | 0 | 0 | 0 | 0 | 0 | 2 | 16 | 25 | 53 | 17 | 37 | 111 | 194 | 206 | 339 | 268 | 188 | 159 | 161 | 222 | 372 |
| 0 | 0 | 0 | 0 | 0 | 0 | 5 | 21 | 23 | 25 | 24 | 65 | 171 | 140 | 285 | 194 | 134 | 146 | 165 | 227 | 375 | 422 |
| 0 | 0 | 0 | 0 | 0 | 0 | 10 | 25 | 21 | 17 | 39 | 117 | 116 | 241 | 163 | 107 | 149 | 196 | 262 | 507 | 450 | 418 |
| 0 | 0 | 0 | 0 | 0 | 1 | 16 | 26 | 20 | 22 | 57 | 159 | 136 | 176 | 99 | 153 | 230 | 301 | 380 | 432 | 434 | 395 |
| 0 | 0 | 0 | 0 | 0 | 4 | 24 | 27 | 19 | 30 | 76 | 92 | 195 | 88 | 164 | 249 | 316 | 397 | 468 | 481 | 424 | 326 |
| 0 | 0 | 0 | 0 | 0 | 10 | 34 | 26 | 18 | 44 | 91 | 221 | 72 | 130 | 238 | 305 | 377 | 508 | 509 | 425 | 307 | 189 |
| 0 | 0 | 0 | 0 | 1 | 26 | 41 | 22 | 18 | 61 | 86 | 61 | 110 | 204 | 293 | 269 | 441 | 446 | 281 | 186 | 121 | 63 |
| 0 | 0 | 0 | 0 | 6 | 50 | 38 | 15 | 24 | 71 | 58 | 67 | 150 | 281 | 190 | 316 | 335 | 110 | 43 | 38 | 29 | 14 |
| 0 | 0 | 0 | 0 | 26 | 63 | 26 | 6 | 39 | 65 | 48 | 100 | 237 | 136 | 232 | 257 | 36 | 1 | 2 | 4 | 4 | 1 |
| 0 | 0 | 0 | 1 | 68 | 48 | 6 | 9 | 55 | 48 | 61 | 142 | 124 | 183 | 210 | 12 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 19 | 84 | 12 | 0 | 24 | 55 | 39 | 90 | 128 | 83 | 100 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 94 | 18 | 0 | 3 | 44 | 34 | 72 | 100 | 69 | 94 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 12 | 27 | 0 | 0 | 16 | 39 | 49 | 59 | 50 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 23 | 0 | 0 | 2 | 35 | 51 | 57 | 12 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 26 | 74 | 45 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 | 4 | 100 | 19 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 |
| 0 | 0 | 0 | 0 | 145 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 7 | 8 |

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 13 | 13 | 10 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 12 | 9 | 7 | 6 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 6 | 5 | 4 | 3 | 3 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | |
|---|---|---|---|
| 109 | 100 | 69 | 39 |
| 183 | 184 | 157 | 79 |
| 274 | 267 | 205 | 109 |
| 357 | 325 | 273 | 166 |
| 445 | 406 | 328 | 195 |
| 397 | 351 | 270 | 161 |
| 334 | 261 | 179 | 97 |
| 231 | 152 | 89 | 42 |
| 107 | 57 | 31 | 24 |
| 28 | 12 | 50 | 16 |
| 4 | 6 | 55 | 24 |
| 0 | 0 | 22 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 1 | 2 | 2 | 1 |
| 4 | 5 | 5 | 3 |
| 8 | 8 | 7 | 4 |

| | | | |
|---|---|---|---|
| 8 | 7 | 6 | 3 |
| 6 | 6 | 4 | 2 |
| 3 | 3 | 3 | 2 |
| 1 | 2 | 2 | 1 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 |